

From: [David Guy](#)
To: [Jensen, Laura@DWR](#)
Cc: [California Water Commission](#); [Yun, Joseph@DWR](#); [Todd Manley](#); [Tim Johnson \(tjohnson@calrice.org\)](#)
Subject: Water Commission's Draft White Paper on Drought Strategies
Date: Monday, November 13, 2023 1:49:12 PM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)
[image002.png](#)
[DryYearUnprecedented2020-2022.pdf](#)
[WaterCommissionDroughtStrategies.july2023.pdf](#)

Laura – thank you for providing the white paper and for the Commission's work in this area. We generally support your path forward and recommendations and offer three additional comments to build on the comments we submitted with the California Rice Commission and others on July 28 (attached).

- **Managing for Ecosystems:** We appreciate recognition in the white paper of the importance “...the lack of water for fish – the right amount, at the right time, and of sufficient quality – is a challenge in most years due to the way water is managed in California...” (page 2) and “...most wildlife management is driven by static, single-species management. Increasing the resilience of fish and wildlife to drought requires managing for entire ecosystems rather than single species.” (page 10) As an example, we are encouraged by the proposed actions within the Agreements to Support Healthy Rivers and Landscapes, which will break from a historic (and unsuccessful) single-species, flow-only regulatory approach in California and address both of these issues through the combination of habitat improvements and targeted, functional flows that will provide ecosystem function for fish and birds while protecting other beneficial water uses. See the Resources Agency website at: <https://resources.ca.gov/Initiatives/Voluntary-Agreements-Page#:~:text=The%20agreements%20encompass%20a%20set,scientific%20monitoring%20and%20changing%20conditions>. We encourage the Commission in the white paper to recognize the *Agreements to Support Healthy Rivers and Landscapes* as a good example of a state program that will advance this important concept.
- **Droughts Affect Every Beneficial Use of Water.** The white paper properly identifies “fish and wildlife and communities” (page 5) among the state's most vulnerable water users as part of this paper. During the most recent drought we also learned that agricultural water users are also vulnerable to a level not previously thought possible. In 2022, many agricultural water management entities received no or little water as shown in the attachment that provides the details of the regional impacts in 2020-2022. We encourage the white paper to directly acknowledge the impacts for different purposes are all inter-related and can be significant. Importantly, the lack of water for agriculture significantly impacted rice production and other crops, which dramatically impacted the regional economy and with no water on the landscape, fish and wildlife and communities also suffered as we described in our July comments.
- **Environmental Flows.** The opportunities identified in the white paper through the establishment and enforcement of environmental flows (page 11) is very consistent with and reinforces the importance of the California Water Commission's efforts to make Proposition 1

investments in Sites Reservoir and other storage projects to help ensure these environmental flows when there is little or no natural water in the system. We thank you for your efforts in Proposition 1 and encourage you to keep advancing this concept.

Thank you and please let us know if you have any questions or we can help in any way.

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[#SourcingOurSustainableFuture](#)



From: Jensen, Laura@DWR <Laura.Jensen@water.ca.gov>

Sent: Monday, November 6, 2023 2:11 PM

To: Jensen, Laura@DWR <Laura.Jensen@water.ca.gov>

Subject: FW: Public comment period opens for Water Commission's Draft White Paper on Drought Strategies

Thank you for playing a critical role in gathering and/or providing feedback on the California Water Commission's efforts to develop strategies to protect communities and fish and wildlife in the event of drought. The Commission has released a draft white paper, *Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought*, which will be presented at the November 15, 2023 [meeting](#).

I hope you will share the draft paper with the groups you represent. The draft white paper can be viewed [here](#).

Public comments can be made at the November 15 meeting, or submitted to cwc@water.ca.gov until December 15, 2023. Commission staff will consider feedback from the Commission and the public to produce a final draft of the white paper that will be submitted for Commission approval at the January 2024 meeting.

Sincerely,
Laura

Laura Jensen

Assistant Executive Officer
California Water Commission
Cell: 916-820-5897

From: California Water Commission <CWC@public.govdelivery.com>
Sent: Monday, November 6, 2023 11:03 AM
To: California Water Commission <CWC@water.ca.gov>
Subject: Public comment period opens for Water Commission’s Draft White Paper on Drought Strategies

Public comment period opens for Water Commission’s Draft White Paper on Drought Strategies

The public comment period is open for the California Water Commission’s draft white paper, [Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought](#). Public comments can be made at the November 15 meeting, or submitted to cwc@water.ca.gov until December 15, 2023.

Over the course of 18 months, the Commission talked with hundreds of people to develop and inform four key strategies for augmenting California’s communities’ and fish and wildlife species’ drought resilience:

1. Scale Up Groundwater Recharge
2. Conduct Watershed-level Planning to Reduce Drought Impacts to Ecosystems
3. Better Position Communities to Prepare for and Respond to Drought Emergencies
4. Support Improved Coordination, Information, and Communication in Drought and Non-drought Years

These strategies build on work underway by California’s State agencies and suggest ways to help California better protect communities and fish and wildlife from the impacts of the state’s inevitable droughts. The Commission will present its final white paper to the Secretaries for Agriculture, Environmental Protection, and Natural Resources, who requested the Commission’s engagement on this topic, for their consideration.

The draft white paper can be viewed [here](#).

Commission staff will consider feedback from the Commission and the public to produce a final draft of the white paper that will be submitted for Commission approval at the January 2024 meeting. Details: cwc.ca.gov/meetings.

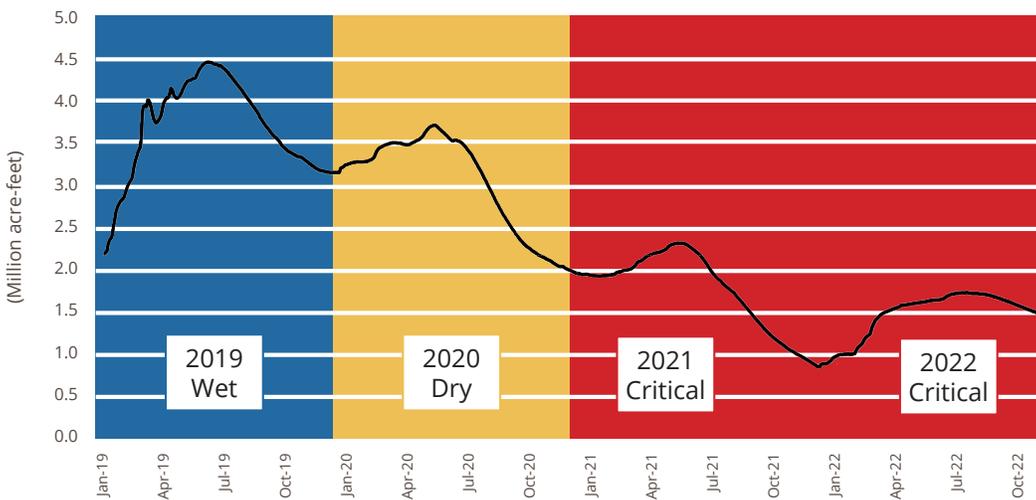
This email was sent to cwc@water.ca.gov from the California Natural Resources Agency utilizing govDelivery.
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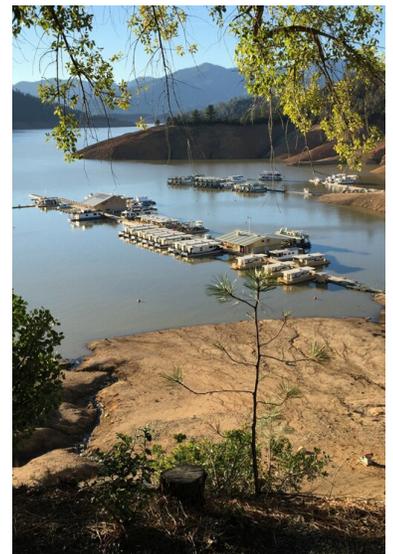
The Sacramento River Watershed Experienced an Unprecedented Dry Period from 2020-2022

California from 2020 to 2022 experienced one of the driest periods on record. In addition to the Colorado River, the Sacramento River watershed in Northern California experienced comparable levels of long-term drought and was especially impacted during this time, with storage in Lake Shasta at extremely low and unprecedented levels.

Shasta Storage



Source: MBK Engineers



This was most vivid in 2022 when the water suppliers on the Sacramento River (Sacramento River Settlement Contractors or SRSC) received between 0 to 18% of their supplies when their contract expressly provides for 75% of supplies in critically dry years. [See CalEPA Informational Statement.](#)

This lack of surface water was unprecedented and significantly impacted:

-  **Drinking water supplies** with only “health and safety” water available. To make up for this lack of surface water, groundwater pumping increased significantly, leading to dry wells throughout the region.
-  **Farmland**, with 600 square miles of farmland fallowed and brown (370,000 acres out of 450,000 acres in the SRSC service area). [See the map of rice acreage.](#)
-  **Communities and the economy**, which in addition to impacts on drinking water supplies, a report by UC Davis estimated that there was \$1.3 billion in lost economic value, 14,300 jobs lost, \$732 million in lost labor income, and devastated supply chains. [See the October 21, 2022 Congressional Record, Recognizing the University of California, Davis Report on “Drought Ravaging California’s Sacramento Valley.”](#)





Fish, with the lowest salmon survival in decades.

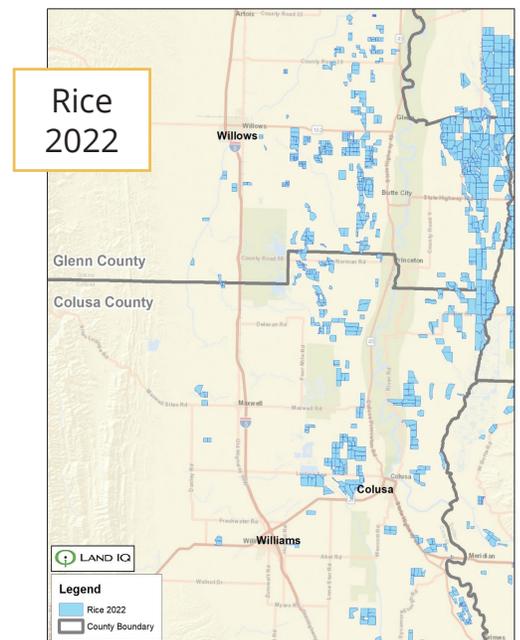
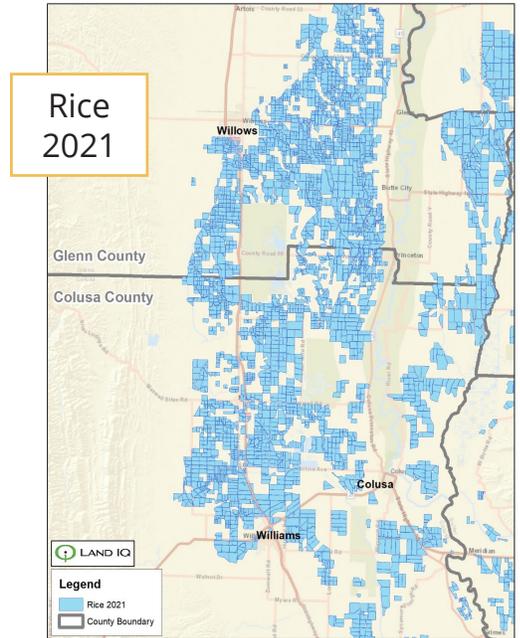


Birds and wildlife, with National Wildlife Refuges receiving 18% of their surface supplies and ricelands less than half of average production (valley-wide), significantly affecting the biodiversity in the region, including critical habitat and food energetics for migrating waterfowl, habitat for the threatened Giant Garter Snake, and the [230 wildlife species](#) that depend upon ricelands. See a [short video](#) highlighting these impacts.

These impacts were especially hard felt in six counties: Colusa, Glenn, Shasta, Sutter, Tehama, and Yolo.

For more details on the impacts of drought in the Sacramento Valley, please see the following:

- July 25, 2022 Congressional Briefing, with a [link to the video](#) from the briefing and a [summary](#) of the briefing.
- [Commentary](#) by Colusa County Supervisors Carter and Kalfsbeek-Smith, which refers and links to a [short film](#) on the impacts in Colusa County.
- The California Governor’s series of Executive Orders and drought proclamations, which specifically listed Colusa, Glenn, Shasta, Sutter, Tehama, and Yolo counties on the west-side of the Sacramento Valley.
- The June 14, 2022 [Statement of Camille Calimlim Touton](#), Commissioner, Bureau of Reclamation, before the Senate Committee on Energy and Natural Resources, highlighting on page 3 that “California’s Central Valley is experiencing its third consecutive critically dry year. Reclamation issued a zero percent allocation to federal Central Valley Project irrigation water service contractors and reduced allocations to the senior Sacramento River Settlement Contractors.”
- The [USDA designation](#) on April 27, 2022 for a Primary Natural Disaster Areas based on drought, including these six counties.
- Bryce Lundberg and Don Bransford’s [statement](#) supporting the Governor and Legislature providing Relief for Communities Affected by Drought in the Sacramento Valley.



Strategies to Protect Communities and Fish and Wildlife during Dry Years in the Sacramento Valley

Presented to the California Water Commission

July 28, 2023

We offer the following to the California Water Commission to showcase the concerted collaboration and efforts that are already underway in the Sacramento Valley to protect communities and fish and wildlife in dry years, and to provide recommendations to help advance these and other efforts to better prepare for future dry years. The document is a joint effort of the California Rice Commission and Northern California Water Association with input from staff of the Central Valley Joint Venture and Grace Espindola, former Yuba City Council Member, and meant to amplify the stakeholder comments provided on June 6, 2023.

Collaboration and Communication

The Sacramento Valley has a culture of collaboration across various agencies and organizations to serve water for multiple benefits. This spirit of collaboration was captured eloquently in a recent partner MOU *To Promote Functioning Ecosystems and Sustainable Water Supplies in California's Sacramento Valley*, which was specifically designed to “expand a framework of cooperation...to preserve, sustain, and promote working agricultural landscapes in the Sacramento Valley that support ecosystem function and provide landscape-scale habitat benefits for fish, bird, and wildlife populations. Our collective goal is to bring our natural and working landscapes in this region to life through the careful interaction of water, sun, and land.” (See [MOU](#))

To better prepare for dry years and facilitate coordination and communications, we have a Sacramento Valley Dry Year Task Force. This Task Force has been kicked off by Secretaries Crowfoot, Garcia, and Ross, with active participation by the directors of the state and federal agencies, local water agencies, farm organizations, and conservation partners. During the recent dry period, the Task Force actively conducted scenario planning for different hydrologic conditions, which allowed for better planning as the severity in anticipated dry years ultimately became reality. During water critical times, the Task Force meets bi-weekly with significant work and coordination between meetings.

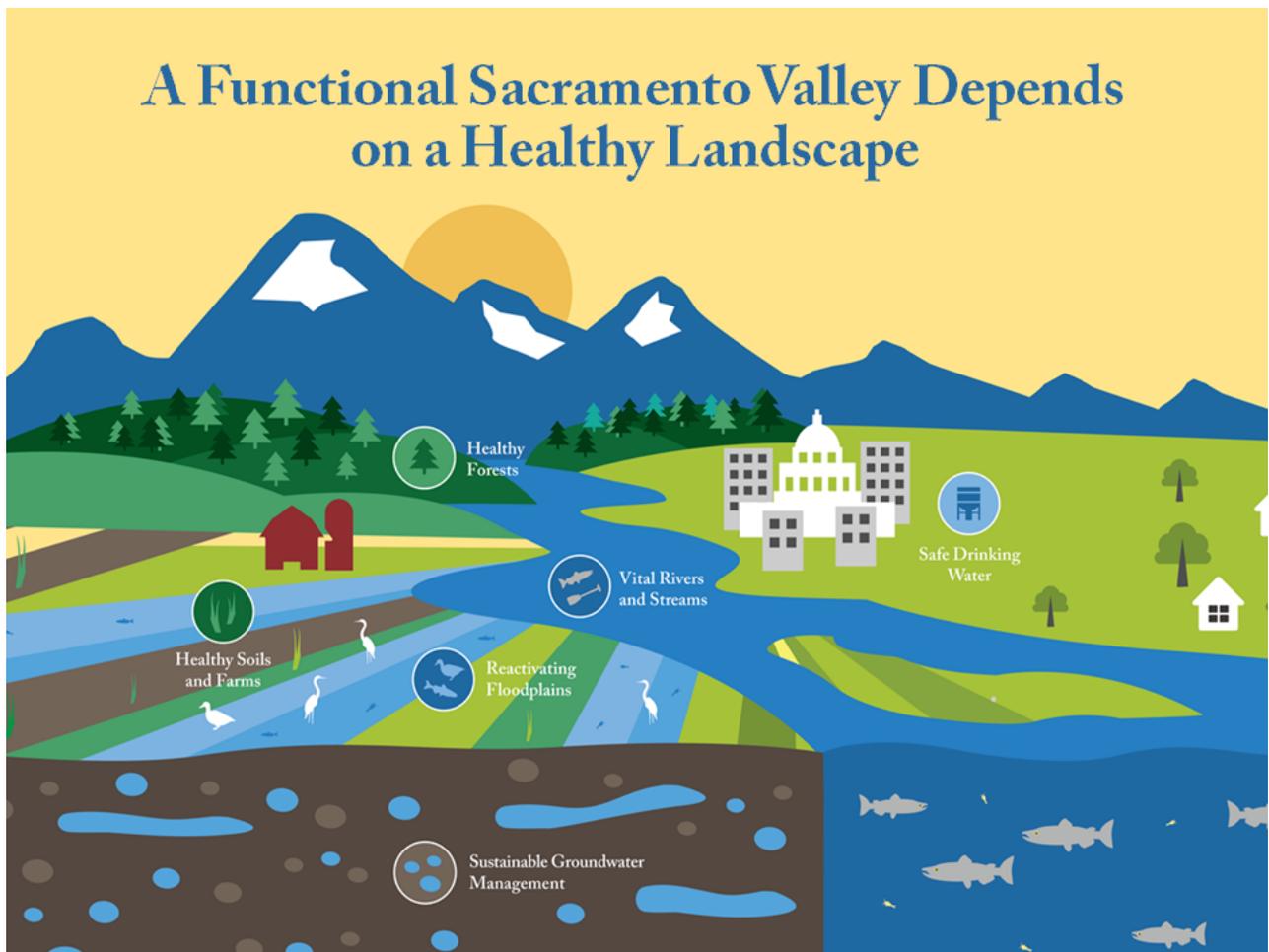
There are also various groups who convene during these times to better coordinate and plan for more specific purposes. That includes the North State Drinking Water Solutions Network that serves as a forum for all interested parties to share information and coordinate efforts related to ensuring that all communities in the Sacramento Valley have access to safe drinking water. Successful implementation of sustainable drinking water solutions for communities requires utilization of both the policy tools and financial resources available to state agencies as well as the knowledge and expertise of local communities and water managers. The State Water Board and Department of Water

Resources have been very helpful in supporting and implementing sustainable, locally developed solutions.

We also have the Floodplain Forward Coalition; a Pacific Flyway waterbird coordinating group focused on meeting the needs of wildlife during dry years; the Butte-Sutter Bypass Coordinated Operations Group to promote collaborative solutions to fish passage in Butte Creek during dry years; and a Groundwater Task Force to coordinate groundwater management throughout the region.

A Functional Sacramento Valley Depends on a Healthy Landscape

As we look at protecting communities and fish and wildlife in future dry years, we need a healthy landscape to support our communities and our vital rivers. In this watershed approach, we look beyond the rivers and creeks to a healthy and highly functioning river valley. We have learned much during the past several decades in the efforts to improve both waterfowl along the Pacific Flyway and spring-run salmon in Butte Creek (see pages 3-4), where wildlife and fish benefitted from and responded directly to having water on the landscape.



This approach has been advanced for the past several decades by the [Central Valley Joint Venture](#) for the Pacific Flyway and is now the focus of the [Floodplain Forward Coalition](#) to actively reactivate the historic floodplain in the Sacramento Valley.

The Sacramento Valley provides fertile ground for this approach as we have:

- **Bypasses** that are important to evacuate water from the region quickly during flood events and are available the rest of the time for more creative fish and wildlife management.
- Seven National Wildlife **Refuges**, as well as more than 50 state wildlife areas.
- **Oxbows** and side-channels along rivers and creeks.
- **Ricelands** provide essential biodiversity in the region supporting [230 wildlife species](#), including critical migratory bird habitat, and over the last 5 years, rice farmers and fish biologists continue working together to help struggling salmon populations by developing strategies to raise juvenile salmon in winter-flooded ricelands. See more [here](#).

The success of this landscape approach and the promise looking forward can be seen in two vivid examples in the Sacramento Valley over the past several decades: migratory birds and spring-run salmon on Butte Creek.

- 1) **Migratory Birds** – The Central Valley of California is recognized as one of the most important regions in North America for migratory birds, especially for waterfowl and other waterbirds. Historically, the Central Valley was an intricate mosaic of seasonal and permanent wetlands, rivers and their associated flood plains, and transitional upland areas of native grasses and riparian habitat. Beginning in the late 1800s, the landscape was altered significantly as agriculture and flood control became the priority for the growing population in the Central Valley. Despite the loss of over 90% of the region’s wetland and riparian habitats, the Central Valley remains a critical destination for birds along the Pacific Flyway. Several million waterfowl and hundreds of thousands of shorebirds, herons, egrets, and ibis visit annually. This is attributed primarily to two factors: 1) the efforts of individuals, organizations, and agencies to protect or restore core area wetland and riparian habitats throughout the valley; 2) the availability and management of farms, ranches, and other working lands to supplement existing habitat and replace lost habitat to support resident and migratory birds.

The importance of working lands to migratory birds in the Central Valley region of California cannot be overstated. The Central Valley Joint Venture (CVJV) recognized the contribution of working lands to migratory bird conservation when developing habitat objectives for its 2020 Implementation Plan. The costs associated with restoring wetlands is considerable, and in certain situations, it is far more efficient to rely on working lands to provide habitat when it is compatible with ongoing farming operations. The most important waterbird habitat provided

by agriculture in the Central Valley is ricelands. Numerous scientific studies have demonstrated the use and importance of ricelands in providing habitat and food to migratory birds during both the breeding and non-breeding seasons.

The CVJV estimated that an average (from 2007-2014) of almost 341,000 acres of ricelands were flooded annually each winter after harvest as a standard practice to decompose excess rice straw. When developing habitat objectives for both waterfowl and shorebirds, the CVJV assumed this level of post-harvest flooding would continue into the future. Thus, any reduction in the extent of flooded rice during the winter would require a concurrent increase in the objectives for other (more costly) flooded habitat types. To encourage continued post-harvest flooding of ricelands, several programs have been implemented to provide incentives to rice growers. These programs are cost-effective and important to meeting CVJV habitat objectives.

The CVJV also recognizes the importance of growing rice in the spring for resident breeding ducks and shorebirds. Studies have shown that the timing of riceland flooding during the spring growing season results in suitable habitat for hens and their ducklings after they hatch. Moreover, especially in dry years, growing ricelands often provide the majority of summer water for duck broods in the Sacramento Valley. Resident ducks build their nests in non-flooded upland areas in close proximity to growing (and flooded) ricelands and wetlands. Working lands that provide this needed upland habitat include idle/fallow ricelands, compatible annual crops such as wheat, and pasture or rangelands. The CVJV established an objective to provide 54,000 acres of upland nesting habitat on working lands, primarily by planting suitable cover on ricelands when scheduled to be fallowed.

Because of the importance of rice to both breeding and non-breeding waterbirds, the CVJV actively encourages the conservation of farmland where rice is a primary crop grown. In the 2020 Implementation Plan, the CVJV has established an objective to protect (via voluntary easement) 54,000 acres of ricelands in the Sacramento Valley. See the [Central Valley Joint Venture 2020 Implementation Plan](#) (page 99).

The success of meeting the bird population goals of the CVJV 2020 Implementation Plan relies greatly on the ability of working lands such as rice farming to maintain or expand their current contribution to habitat conservation objectives. This will require sufficient water supplies on the landscape to continue growing rice in the Sacramento Valley, and to flood the 341,000 acres of post-harvest ricelands during the fall and winter.

- 2) **Butte Creek Spring Run Salmon** - As a result of the Butte Creek Fish Passage Improvement projects over the past several decades, in tandem with a valuable food supply and safe rearing habitat on the landscape in the Sutter Bypass wetlands, Butte Creek has been the [most successful spring-run fishery](#) in the Sacramento River Basin. These projects all provide multiple beneficial uses,

serving water for fish, farms, birds, and various other species. *The Butte-Sutter Bypass Coordinated Operations Group* is building upon these efforts by continuing to advance a series of projects to improve spring run habitat, including passage improvement projects, a long-term program to address invasive aquatic weeds in the Sutter Bypass, and a program to voluntarily coordinate diversions to enhance fish passage. See [Butte Creek Program](#).

Functional Sacramento Valley Communities Depend on Agricultural Jobs

The impacts of the 2022 drought in the Sacramento Valley are a striking example of just how linked our small towns are with the production of food. With more than 600 square miles of fallowed farm fields, UC Davis estimated that the 2022 drought impacts on farm production likely caused a loss of about 14,300 jobs and about \$1.315 billion in economic value added in the Sacramento Valley. Of that total, over \$500 million of lost wages were realized. See [The Sacramento River Watershed Experienced an Unprecedented Dry Period from 2020-2022](#) and [Continued Drought in 2022 Ravages California's Sacramento Valley Economy](#).

The impacts of drought on communities, particularly on farm workers and the agricultural industry, are significant. Here are some key effects:

- **Water Drought Crisis:** Drought creates a scarcity of water resources, leading to limited access to clean water for drinking, sanitation, and irrigation. This directly affects farm workers who rely on water for their daily needs and crop production.
- **Excess Precipitation, and Flooding:** While climate change has brought about extreme weather events, such as excessive water, snow, and flooding, these conditions pose additional challenges to farm workers. Excessive water can damage crops, disrupt farming schedules, and make it difficult for workers to perform their duties.
- **Working Conditions and Agreements:** The agricultural industry faces the need for farmers and contractors to come to agreement on working conditions. These negotiations become more crucial during droughts and extreme weather events, as the workforce requires fair treatment and protection from harsh conditions.
- **Expensive Childcare:** Farm workers often struggle with the financial burden of expensive childcare. During droughts and climate-related crises, when working conditions may be more unpredictable, the cost of childcare can become an additional hardship for farm workers.
- **Housing Needs:** Drought and climate change can exacerbate existing challenges in providing adequate housing for farm workers. As these workers face uncertain employment conditions and environmental hardships, the availability of safe and affordable housing becomes even more critical.

- Heat-Related Illnesses: Farm workers are at increased risk of heat-related illnesses due to their exposure to high temperatures during prolonged work hours. Droughts and climate change intensify heatwaves, amplifying the health risks faced by these workers, who may lack access to adequate shade and hydration.
- Temporary Employment and Shorter Crop Seasons: Drought can lead to reduced crop yields and shorter crop seasons, affecting the livelihoods of farm workers who rely on consistent employment. Temporary employment becomes more prevalent, making it difficult for workers to secure stable income and plan.
- Competing Water Resources: Drought and inadequate city planning, and development strategies contribute to competing demands for the same limited water resources. This can lead to conflicts between urban and agricultural communities, further impacting farm workers' access to water for irrigation and their overall well-being.

Recommendations for the California Water Commission

We encourage the Water Commission to consider and help state, federal and local agencies advance the following actions that will put water on the landscape for the benefit of communities and fish and wildlife during dry years:

- 1) Ensure that Central Valley Project and State Water Project operations and allocations maximize surface water deliveries on the landscape for communities, refuges, ricelands and other farmland, and private wetlands. See e.g., [Why Spring Diversions on the Sacramento River are Important to Serve Multiple Benefits](#). This includes the real time operation of SWRCB Term 91 for fall and winter water and select water transfers within the region for communities and fish and wildlife.
- 2) Help support regional and local efforts to ensure that all communities in the Sacramento Valley have access to safe drinking water, including funding and regulatory approvals.
- 3) Comprehensive efforts that consider the specific needs of farm workers, including improved water management, increased support for childcare, affordable housing initiatives and worker safety regulations.
- 4) Improve surface water deliveries to federal refuges and state wildlife areas. See [Central Valley Refuge Needs](#). The California Department of Fish and Wildlife (CDFW) has also partnered with the California Waterfowl Association and Ducks Unlimited to implement projects on CDFW owned lands that will improve our wildlife area's long-term resilience, and better prepare us to provide for the needs of wildlife during future drought cycles, including recent additional operating funding (\$1M) for Wildlife Areas.
- 5) Support creative solutions by state agencies (the Department of Water Resources (DWR), CDFW, and others) working with conservationists, farmers, and other land managers. Identify new ways of enhancing existing wetlands and

providing additional habitat in the Sacramento Valley with both surface and groundwater to help respond to the reduction in surface water and immediate drought impacts creating a loss in migratory waterfowl habitat. As an example, over the past several years the state has contributed more than \$44 million to launch or support programs, in collaboration with local partners, that are providing critical habitat for migratory birds and wildlife by working with California's farming community. These programs include:

- DWR has contributed \$16 million in multi-benefit drought relief funds to the California Rice Commission (CRC) to support a special **Drought Relief Waterbird Program** to help respond to immediate drought impacts creating a loss in migratory waterfowl habitat in the Sacramento Valley.
 - CDFW has partnered with The Nature Conservancy (\$15 million) to implement their **BirdReturns Habitat Incentive Program** on wildlife-friendly agricultural lands and wetlands.
 - The state has also launched the **Delta Drought Response Pilot Program**, which provides financial incentives for farmers to reduce their water use and protect wildlife and water quality in the Delta.
 - **California Winter Rice Habitat Incentive Program** (\$3 million; CDFW, CRC)
 - **California Waterfowl Habitat Program** (\$1 million annually; CDFW)
- 6) Support fish food programs. There is a concerted effort to reactivate the historic floodplain in the Sacramento Valley, with a focus on providing food and safe haven for fish. There are amazing opportunities to scale-up the reactivation of the historic floodplains during dry years for the benefit of fish and wildlife. This past year nearly 30,000 acres were flooded for fish food programs, which needs to be scaled up. These programs have been supported by both state, federal and private funding.
- 7) Advance multi-benefit groundwater recharge. Water on the landscape for groundwater recharge will be an important tool to achieve long-term groundwater sustainability in the region and recharging aquifers is important for multiple purposes, including agricultural productivity, domestic water use, and providing water for groundwater dependent ecosystems. See [TNC's Multi-Benefit Recharge](#). The water agencies in the Sacramento Valley have a strong interest in accelerating the pace and scale of multi-benefit groundwater recharge projects and want to partner more deeply with state agencies to achieve this goal as seen in [Accelerating Multi-Benefit Groundwater Recharge in the Sacramento Valley](#).
- 8) Complete Sites Reservoir. The Governor has prioritized the completion of Sites Reservoir in the recent infrastructure package to help serve various purposes throughout California. (See also 2.2 in [California's Water Supply Strategy: Adapting to a Hotter, Drier Future](#).) For the fish and wildlife benefits, see the commentary by Ducks Unlimited: [Pacific Flyway birds are counting on California to honor voters and build Sites Reservoir](#). The Water Commission can assist by

expediting Proposition 1 funding and helping the strike team accelerate permitting.

- 9) Engage with the Sacramento Valley. We encourage state and federal agencies to actively engage with local agencies and actively participate in the Dry Year Task Force, the North State Drinking Water Solutions Network, and other specific groups that emerge to serve water for these important purposes.

We look forward to working with state and federal agencies and our many partners to better prepare for dry years in the Sacramento Valley.